POWER DENSITY ESTIMATIONS BASED ON POWER OUTPUT, ANTENNA GAIN, AND DISTANCE FROM ANTENNA

$$(P\,G)/(4\,R^{2}\,\pi) = S$$

where:			transmitter operating variables:			must be blank if dB values are entered	
S =	maximum power density (mW/cm^2)						
P =	power input to the antenna ---------->>	=	8.06	(dBm) - or -			(mW)
G =	gain of the antenna - worst case ---------->>	=	3.3	(dBi) - or -			(numeric gain)
R =	distance to the center of the radiation of the antenna -->>	=	20				(cm)

(P G) / (4 * R ^{2} * π)	=	S	(mW/cm^2)
(6.397348355 (mw) 2.13796 (gain)) / (4 * 20 (cm) ^{2} * π)	=	S	(mW/cm^2)
(13.67728826) / (4 * 400 * π $_3$)	=	S	(mW/cm^2)
(13.67728826) / (5026.548246)	=	0.002721	(mW/cm^2)